SOIL SURVEY OF

Kankakee County, Illinois

REFERENCE 5
SITE NAME ROPER CORPORATION
SITE ID ILT-180-010-423

United States Department of Agriculture
Soil Conservation Service
In cooperation with
Illinois Agricultural Experiment Station

Selma Series

The Selma series consists of nearly level, poorly drained soils on broad glacial outwash plains, mainly north and east of the Kankakee River. These soils formed in medium textured and moderately coarse textured glacial outwash material. The native vegetation was prairie grasses adapted to swampy conditions.

In a representative profile the surface layer is black and very dark gray heavy loam about 14 inches thick. The subsoil is about 28 inches thick. In the upper 5 inches it is dark grayish brown light clay loam; in the middle 19 inches it is clay loam that has large yellowish brown mottles; and in the lower 4 inches it is gray sandy loam. The underlying material is light gray and light brownish gray sand. It is neutral glacial outwash material.

Permeability is moderate, and the available water capacity is high. The organic-matter content is high.

Most areas of these soils are used intensively for corn and soybeans. Selma soils are well suited to these and other commonly grown crops.

Representative profile of Selma loam, 62 feet west and 2,010 feet south of the northeast corner of sec. 2, T. 31 N., R. 14 E.

Ap—0 to 9 inches; black (10YR 2/1) heavy loam; moderate fine and medium granular structure; friable; neutral; abrupt smooth boundary.

A12—9 to 14 inches; very dark gray (10YR 3/1) heavy loam; moderate fine and medium granular structure; friable; neutral; clear smooth boundary.

B1—14 to 19 inches; dark grayish brown (2.5Y 4/2) light clay loam; few fine faint yellowish brown (10YR 5/4) mottles; weak fine prismatic structure parting to moderate very fine subangular blocky; firm; very dark gray (10YR 3/1) coatings on ped faces; neutral; clear smooth boundary.

B21t—19 to 26 inches; gray (5Y 5/1) clay loam; many medium prominent yellowish brown (10YR 5/6) mottles; moderate medium prismatic structure parting to moderate fine subangular blocky; firm; dark gray (10YR 4/1) coatings on ped faces; neutral; clear smooth boundary.

B22t—26 to 38 inches; gray (5Y 5/1) clay loam (with 3-inch horizon of silty clay loam); many coarse yellowish brown (10YR 5/8) mottles; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; some very dark gray (10YR 3/1) stains in krotovinas; neutral; clear smooth boundary.

B3—38 to 42 inches; gray (5Y 6/1) sandy loam; weak medium prismatic structure parting to weak medium angular blocky; very friable; very large areas (80 percent) have very dark gray (10YR 3/1) and dark gray (10YR 4/1) stains; neutral; abrupt wavy boundary.

IIC—42 to 60 inches; light gray (5Y 6/1) and light brownish gray (10YR 6/2) sand; single grained; neutral.

The A horizon ranges from 12 to 18 inches in thickness. It ranges from light loam to clay loam. The B2 horizon is dominantly clay loam but includes sandy clay loam and silty clay loam. The B3 horizon is commonly stratified and has variable textures. The underlying material ranges from loam to sand. It is stratified glacial outwash material. Limestone is below the solum at a depth of 40 to 60 inches in places.

Selma soils are associated with Darroch, Jasper, and Gilford soils. Selma soils are more poorly drained than Darroch and Jasper soils. They contain more clay throughout the solum than Gilford soils.

125—Selma loam. This is a nearly level soil on broad glacial outwash plains. Slope is 0 to 2 percent.

Included with this soil in mapping are small areas of Darroch silt loam and Gilford fine sandy loam. Wet areas, calcareous areas, and gray spots are shown on the soil map by conventional symbols.

If drained, this soil is well suited to most crops commonly grown in the county. A seasonal high water table in all areas and the risk of ponding in the lower lying areas can be serious limitations to use. Runoff is slow. Tile drains and shallow surface ditches are needed to improve drainage, especially for cultivation early in spring. Management group IIw-1.

R125—Selma loam, bedrock substratum. This is a nearly level soil on broad glacial outwash plains. It has a profile similar to the one described as representative of the series, but has limestone bedrock at a depth of 40 to 60 inches.

Included with this soil in mapping are small areas of Plattville silt loam, 0 to 2 percent slopes; Rockton loam, 0 to 2 percent slopes; and Faxon clay loam. Wet areas and calcareous areas are shown on the soil map by conventional symbols.

A seasonal high water table in all areas and the risk of ponding in the lower lying areas can be serious limitations in the use of this soil. Runoff is slow. Tile drains and shallow surface ditches are needed to improve drainage, especially for cultivation early in spring. Management group IIw-1.

Sparta Series

The Sparta series consists of nearly level to moderately sloping, excessively drained soils in high-lying areas that vary in size. These soils formed in sandy glacial outwash material. The native vegetation was prairie grasses.

In a representative profile the surface layer is very dark brown loamy fine sand about 17 inches thick. The subsoil is brown and yellowish brown loamy fine sand and fine sand about 19 inches thick. The underlying material is brownish yellow and light yellowish brown fine sand that has strong brown mottles.

Permeability is very rapid, and the available water capacity is low. The organic-matter content is moderately low.

Sparta soils are better suited to small grain and meadow crops than to corn and soybeans. When farmed with surrounding soils, they need special protection from soil blowing.

Representative profile of Sparta loamy fine sand, 1 to 5 percent slopes, 83 feet south and 45 feet east of the northwest corner of sec. 6, T. 30 N., R. 10 W.

Ap—0 to 7 inches; very dark brown (10YR 2/2) to black (10YR 2/1) loamy fine sand; weak medium granular structure; very friable; medium acid; abrupt smooth boundary.

A12—7 to 17 inches; very dark brown (10YR 2/2) loamy fine sand; weak medium granular structure; very friable; strongly acid; clear wavy boundary.

B21—17 to 20 inches; brown (10YR 4/3) loamy fine sand; single grained; loose; strongly acid; clear wavy boundary.

TABLE 10.—*Physical and chemical properties*

[Dashes indicate data were not available. The symbol < means less than; > means greater than. The erosion tolerance factor (T) is for the entire profile. Absence of an entry means data were not estimated]

Soil name and map symbol	Depth	Permeability	Available water capacity	Soil reaction	Salinity	Shrink-swell potential	Risk of corrosion		Erosion factors		Wind erodibility group
							Uncoated steel	Concrete	K	T	
	In	*In/hr*	*In/in*	*pH*	*Mmhos/cm*						
Watseka: 49	0–10	6.0–20	0.07–0.12	6.1–7.3	<2	Very low	Low	Moderate			2
	10 60	6.0–20	0.05–0.10	5.1–7.3	<2	Very low	Low	High			
Milford: 69	0–16	0.6–2.0	0.12–0.23	6.1–7.3	<2	High	High	Low			4
	16–47	0.2–0.6	0.11–0.20	6.6–7.8	<2	High	High	Low			
	47–60	0.2–0.6	0.14–0.20	7.4–8.4	<2	Moderate	High	Low			
Sparta: 88B	0–20	>20	0.12–0.14	5.6–6.0	<2	Low	Low	Low	0.17	5	2
	20–60	>20	0.06–0.08	5.6–6.0	<2	Low	Low	Low	0.17		
Maumee: 89	0–18	6.0–20	0.10–0.12	6.1–6.5	<2	Low	High	Moderate			2
	18–60	>20	0.05–0.07	6.1–7.8	<2	Low	High	Moderate			
Ade: 98B	0–14	6.0–20	0.10–0.12	5.1–6.5	<2	Low	Low	High	0.17	5	2
	14–66	6.0–20	0.06–0.08	5.1–6.0	<2	Low	Low	High	0.17		
	35–60	6.0–20	0.06–0.08	5.1–6.0	<2	Low	Low	High	0.17		
	60–70	6.0–20	0.06–0.08	6.1–8.4	<2	Low	Low	High	0.17		
Palms: 100	0–37	0.2–6.0	0.35–0.45	5.1–7.8	<2		High	Moderate			3
	37–60	0.6–2.0	0.05–0.19	6.1–8.4	<2	Low	High	Low			
Sawmill: 107	0–53	0.2–2.0	0.18–0.23	6.1–7.8	<2	Moderate	High	Low			7
	53–60	0.2–2.0	0.11–0.20	7.4–8.4	<2	Moderate	High	Low			
Selma:											
125	0–14	0.6–2.0	0.17–0.22	6.1–7.8	<2	Moderate	High	Low			6
	14–38	0.6–2.0	0.15–0.19	6.1–7.8	<2	Moderate	High	Low			
	38–60	0.6–6.0	0.05–0.22	6.1–7.8	<2	Low	High	Low			
R125	0–14	0.6–2.0	0.17–0.22	6.1–7.8	<2	Moderate	High	Low			6
	14–38	0.6–2.0	0.15–0.19	6.1–7.8	<2	Moderate	High	Low			
	38										
Alvin: 131B, 131C2, 131F	0–12	2.0–6.0	0.14–0.20	5.1–6.5	<2	Low	Low	High	0.24	5	3
	12–44	2.0–6.0	0.12–0.20	4.5–6.0	<2	Low	Low	High	0.24		
	44–64	6.0–20	0.05–0.13	5.1–7.8	<2	Low	Low	High	0.24		
Elliott: 146A, 146B	0–14	0.6–2.0	0.21–0.24	5.6–6.5	<2	Moderate	High	Moderate	0.32	4	6
	14–41	0.2–0.6	0.11–0.20	5.6–7.8	<2	Moderate	High	Moderate	0.32		
	41–60	0.2–0.6	0.14–0.20	7.4–8.4	<2	Moderate	High	Low	0.32		
Onarga: 150A, 150B	0–12	0.6–2.0	0.13–0.22	5.6–6.5	<2	Low	Low	Moderate	0.20	4–3	3
	12–29	0.6–2.0	0.15–0.19	5.1–6.5	<2	Low	Low	High	0.20		
	29–60	6.0–20	0.05–0.13	5.1–7.8	<2	Low	Low	High	0.15		
Hoopeston: 172	0–46	2.0–6.0	0.12–0.15	5.1–6.5	<2	Low	Moderate	High			3
	46–60	6.0–20	0.05–0.10	5.6–7.8	<2	Very low	Low	Moderate			
Beardstown: 188	0–14	0.6–2.0	0.17–0.24	5.6–6.5	<2	Low	High	Moderate	0.28	5	5
	14–50	0.6–2.0	0.15–0.19	4.5–6.0	<2	Low	High	High	0.28		
	50–60	2.0–6.0	0.08–0.18	5.1–6.0	<2	Low	Moderate	Moderate	0.17		
Martinton: 189	0–13	0.6–2.0	0.22–0.24	5.1–6.5	<2	Low	High	Moderate	0.32	5	6
	13–37	0.2–0.6	0.11–0.20	5.6–7.8	<2	Moderate	High	Moderate	0.43		
	37–60	0.06–0.2	0.11–0.22	7.9–8.4	<2	Moderate	High	Low	0.43		